WE CLAIM:

1. A cooking assembly comprising:

a base member;

a tray unit mounted detachably on said base member, and including a cooking tray and a socket that is fixed securely to said cooking tray and that has a socket casing formed with a plug hole that defines a plug path therein;

a plug insertable releasably into said plug hole in said socket casing along said plug path for establishing electrical connection with said tray unit; and

a safety device including at least one spring-biased latch mounted movably in said socket casing, having first and second engaging ends, and movable in a transverse direction relative to said plug path between a first position, in which said first engaging end of said latch is disposed at a position within said plug path, thereby permitting contact between said first engaging end of said latch and said plug when said plug is inserted into said plug hole in said socket casing, and in which said second engaging end of said latch is disengaged from said base member, and a second position, in which said first engaging end of said latch is disposed at a position outside said plug path , and in which said second engaging end of said latch engages said base member.

2. The cooking assembly as defined in Claim 1, wherein said safety device includes two of said latches, said cooking assembly further comprising two first urging members for urging respectively said latches toward said first position.

3. The cooking assembly as defined in Claim 2, wherein said cooking tray has a front end, said socket casing being fixed to said front end of said cooking tray, defining an inner space therein, and including a front wall that defines a front side of said inner space and that is formed with an opening for extension of said plug therethrough, said opening being in spatial communication with said plug path.

4. The cooking assembly as defined in Claim 3, wherein said socket casing further includes two opposite side walls extending rearwardly and respectively from two opposite sides of said front wall and formed with two opposite extension slots, respectively, said latches being mounted movably in said inner space and extending in said transverse direction, said second engaging ends of said latches being received respectively in said extension slots in said side walls when said latches are disposed at said first position, and extending respectively through said extension slots to engage said base member when said latches are disposed at said second position.

5. The cooking assembly as defined in Claim 1, wherein

said base member has a front end formed with a socket-receiving recess to receive said socket casing when said tray unit is mounted on said base member, said socket-receiving recess being defined by a recess-confining wall that has two opposite vertical wall portions formed with two retention grooves, respectively, said second engaging ends of said latches respectively extending into and engaging said retention grooves when said latches are disposed at said second position, thereby preventing undesired removal of said tray unit from said base member.

6. The cooking assembly as defined in Claim 3, wherein said socket casing is formed with a hollow protrusion that projects rearwardly from said front wall into said inner space and defining said plug hole, and that is formed with two opposite holes in spatial communication with said plug hole, said first engaging ends of said latches extending through said holes in said protrusion and into said plug path when said latches are disposed at said first position, and being retracted in said holes when said latches are disposed at said second position.

7. The cooking assembly as defined in Claim 5, wherein said front end of said base member is further formed with at least one engaging part that projects transversely from said recess-confining wall into said recess, said engaging part extending into said socket

casing when said tray unit is mounted on said base member, said plug including a temperature sensor projecting outwardly therefrom, said temperature sensor being moved along a sensor passage during insertion of said plug into said plug hole in said socket casing in order to come close to said cooking tray when said tray unit is mounted on said base member, said safety device further including at least one spring-biased stop member that is mounted movably in said socket casing, that is disposed rearwardly of said lathes and that has opposite first and second ends, said stop member being disposed at a stopping position, in which said first end of said stop member is disposed at a position within said sensor passage when said tray unit is detached from said base member, thereby preventing extension of said temperature sensor through said sensor passage toward said cooking tray, said second end of said stop member contacting and being pushed by said engaging part of said base member upon mounting of said tray unit on said base member in such a manner that said stop member moves in said transverse direction from said stopping position to an open position, in which said first end of said stop member is disposed at a position outside said sensor passage, thereby permitting extension of said temperature sensor through said sensor passage toward said cooking tray.

8. The cooking assembly as defined in Claim 7, wherein said safety device includes two of said stop members, said cooking assembly further comprising two second urging members for urging respectively said stop members to said stopping position.

9. The cooking assembly as defined in Claim 8, wherein said front end of said base member is formed with two of said engaging parts, said socket casing having two opposite side walls formed with two apertures for extension of said engaging parts of said base member therethrough so as to push said second ends of said stop members and so as to move said stop members against urging action of said second urging members from said stopping position to said open position when said tray unit is mounted on said base member.

10. The cooking assembly as defined in Claim 7, wherein each of said stop members has a U-shaped end segment that includes a bight portion defining said first end of a respective one of said stop members, and two opposite arm portions extending from two opposite sides of said bight portion and defining a gap therebetween, said gaps between said arm portions of said U-shaped end segments of said stop members being disposed outside of said sensor passage when said stop members are disposed at said stopping position, said gaps being disposed within said sensor passage so as to permit extension of said temperature sensor

therethrough when said stop members are disposed at said open position.

11. The cooking assembly as defined in Claim 3, wherein said socket casing defines a rear opening opposite to said front wall, and includes a rear cover covering said rear opening.

12. A cooking assembly comprising:

a base member formed with at least an engaging part;

a tray unit mounted detachably on said base member, and including a cooking tray and a socket that is fixed securely to said cooking tray and that has a socket casing formed with a plug hole that defines a plug path therein, said engaging part of said base member extending into said socket casing when said tray unit is mounted on said base member;

a plug insertable releasably into said plug hole in said socket casing, and including a temperature sensor projecting outwardly therefrom, said temperature sensor being moved along a sensor passage during insertion of said plug into said plug hole in said socket casing in order to come close said cooking tray; and

a safety device including at least one spring-biased stop member mounted movably in said socket casing, and having opposite first and second ends, said stop member being disposed at a stopping position, in which said first end of said stop member is disposed

at a position within said sensor passage when said tray unit is detached from said base member, thereby preventing extension of said temperature sensor through said sensor passage to come close to said cooking tray, said second end of said stop member contacting and being pushed by said engaging part upon mounting of said tray unit on said base member such that said stop member moves in a transverse direction relative to said sensor passage from said stopping position to an open position, in which said first end of said stop member is disposed at a position outside said sensor passage, thereby permitting extension of said temperature sensor through said sensor passage to come close to said cooking tray.

13. The cooking assembly as defined in Claim 12, wherein said base member has a front end formed with two of said engaging parts, said cooking tray having a front end, said socket casing being fixed to said front end of said cooking tray, defining an inner space therein, and including a front wall that defines a front side of said inner space and that is formed with an opening for extension of said plug therethrough, said opening being in spatial communication with said plug hole, said safety device including two of said stop members, which are movably received in said inner space, said socket casing further including two opposite side walls extending rearwardly and

respectively from two opposite sides of said front wall and formed with two apertures, respectively, for extension of said engaging parts of said base member therethrough so as to push said second ends of said stop members and so as to move said stop members from said stopping position to said open position when said tray unit is mounted on said base member.

14. The cooking assembly as defined in Claim 12, further comprising two urging members for urging respectively said stop members from said open position to said stopping position when said tray unit is detached from said base member.

15. The cooking assembly as defined in Claim 12, wherein each of said stop members has a U-shaped end segment that includes a bight portion defining said first end of a respective one of said stop members, and two opposite arm portions extending from two opposite sides of said bight portion and defining a gap therebetween, said gaps between said arm portions of said U-shaped end segments of said stop members being disposed outside of said sensor passage when said stop members are disposed at said stopping position, said gaps being disposed within said sensor passage so as to permit extension of said temperature sensor therethrough when said stop members are disposed at said open position.

16. The cooking assembly as defined in Claim 13,

wherein said socket casing defines a rear opening opposite to said front wall, and includes a rear cover covering said rear opening in said socket casing.